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Response dated: December 29, 2008
Reply to OA of: June 26, 2008

REMARKS

At the outset, Applicants thank Examiner Lau and SPE Shaojia Anna Jiang for their time and consideration of the above-identified application during the November 25, 2008 interview with the undersigned. During the interview, the issues raised in the outstanding Official Action were discussed. In particular, Applicants discussed the ways in which the present invention were distinct from the prior art. In addition, Applicants explained how the disclosure of the above-identified application was enabling for the present invention. Examiner Lau and SPE Shaojia Anna Jiang stated that they would take the arguments of the undersigned under consideration but indicated that no agreement with respect to the claims was reached.

Applicants have cancelled claims 1-35 and added new claims 36-55. Claims 36-55 recite methods for reducing the invasion and infection of pathogenic, intracellular bacteria. Independent claims 36 and 55 are the pending independent claims. Independent claim 36 recites a method for reducing the invasion and infection of mammalian cells by pathogenic, intracellular bacteria to reduce diseases caused by said pathogenic, intracellular bacteria. Claim 36 is the independent base claim for claims 37-52. Independent claim 53 is directed to a method for reducing the invasion and infection of a pathogenic, intracellular bacteria in a subject exposed to said

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pathogenic, intracellular bacteria. Claim 53 is the independent base claim for claims 54-55.

Support for new claims 36-55 may be found generally throughout the specification and the original claims. In particular, support for the new claims may be found in the present specification at page 3, lines 10-15; page 5, lines 1-20; page 8, lines 9-14; and page 9, lines 1-10.

Applicants respectfully submit that all of the claims are in accordance with the elected invention (i.e., a method of reducing the infection and invasion of mammalian cells).

Applicants respectfully submit that no new matter has been added to the disclosure.

In the outstanding Official Action, claims 19-32 and 35 are rejected under 35 U.S.C. 112, first paragraph, for allegedly not satisfying the enablement requirement. Applicants believe the present amendment overcomes this rejection.

In imposing the rejection, the Official Action alleged the specification does not provide enablement for reducing the invasion and infection of mammalian cells by all invasive gram-positive and gram-negative pathogenic bacteria, or for preventing the invasion and infection of mammalian cells by such pathogens.

However, as noted above, claims 1-36 have been cancelled. The new claims are directed to methods for reducing the invasion and infection of mammalian cells by

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pathogenic, intracellular bacteria. Thus, the claims are no longer directed to any and all types of bacteria, or recite the term "preventing".

Applicants understand that the Patent Office interprets the term "preventing" as meaning "to make impossible". In the other words, the recited event/condition never occurs again. In this regard, the term "preventing" is no longer recited in the claims. However, Applicants do not disclaim any subject matter relating to the manner in which the cycloglycans in the invention are administered (e.g., prospectively administering the cycloglycans of the invention).

The Examiner's attention is also respectfully directed to new claims 49-52 and 54-55. Claims 49-51 and 53 further recite that the bacteria is a particular type of bacteria. The pathogens recited in claims 49-51 and 52 are specifically disclosed on page 8 of the specification. Claims 52 and 54 recite that the subject has a disease caused by said pathogenic, intracellular bacteria. The specification at page 9, lines 1-5 discloses that the method can be used for the "therapy of an infection". In this regard, Applicants most respectfully submit that the present disclosure plainly supports the claimed invention.

Claims 26, 28 and 29 are rejected under 35 U.S.C. 112, second paragraph, for allegedly being indefinite. Applicants respectfully submit that the present amendment overcomes this rejection.

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As noted above, Claims 26, 28 and 29 are no longer pending. Applicants believe the new claims have been amended to avoid the issues raised in the indefinite rejection.

Claims 19-32 and 35 are rejected under 35 U.S.C. 102(b) for allegedly being anticipated by Anand et al (U.S. Patent No. 5,221,669). Applicants most respectfully submit that the present amendment overcome this rejection.

Anand et al. disclose antiviral compositions containing α -cyclodextrin sulfates alone and in combination with other known antiviral agents and glucocorticoids as well as methods of treating viral infections (abstract and col. 3, lines 1-10). Thus, Anand et al. administers an " α -cyclodextrin (CD) sulfate used to treat a viral infection."

As noted above, the claimed invention is directed to a method for reducing the invasion and infection of pathogenic, intracellular bacteria. In this regard, Applicants respectfully submit that Anand et al. fails to anticipate the claimed invention.

The Examiner's attention is also respectfully directed to new claims 45, 49-52 and 54-55. Claim 45 further characterizes the manner in which the cycloglycans of the invention are administered. Claims 49-51 and 53 further recite that the bacteria is a particular type of bacteria. Claims 52 and 54 recite that the subject has a disease caused by said pathogenic, intracellular bacteria. The publicaiton fails to disclose or suggest any of the recitations of claims 45, 49-52, and 54-55.

Thus, Applicants respectfully request that the rejection be withdrawn.

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Claims 19-25, 31 and 32 are rejected under 35 U.S.C. 102(b) as allegedly being anticipated by Roth et al. (WO/90/00596). Applicants most respectfully submit that the present amendment overcome this rejection.

Roth et al. disclose methods of inhibiting viral infections in cells. Carbohydrate blocking agents capable of interacting with the cells or virus are provided and contacted with the cells under conditions selected to effect interaction of the carbohydrate-blocking agent with the cells or virus resulting in interference with binding of the virus with the cells. Suitable carbohydrate blocking agents include cyclodextrins. Roth et al also provide methods of inhibiting formation of syncytia between cells or virus utilizing cyclodextrins. However, as already noted above, the claimed invention is directed to a method for reducing the invasion and infection of pathogenic, intracellular bacteria. As Roth et al. does not disclose or suggest that cyclodextrins can be used to inhibit the invasion and infection of bacteria in a cell or subject, Roth et al fail to anticipate the claimed invention.

The Examiner's attention is also respectfully directed to new claims 45, 49-52 and 54-55. Claim 45 further characterizes the manner in which the cycloglycans of the invention are administered. Claims 49-51 and 53 further recite that the bacteria is a particular type of bacteria. Claims 52 and 54 recite that the subject has a disease caused by said pathogenic, intracellular bacteria. The publication fails to disclose or suggest any of the recitations of claims 45, 49-52, and 54-55.

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Thus, Applicants respectfully request that the rejection be withdrawn.

Claims 19-29 and 31 are rejected under 35 U.S.C. 102(b) as allegedly being anticipated by Nelson (U.S. Patent No. 6,261,540). Applicants most respectfully submit that the present amendment overcome this rejection.

Nelson discloses an oral rinse and dentifrice composition, comprising a mint flavor, mint flavor ingredient, citrus flavor, citrus flavor ingredient, phenolic ingredient, or mixtures thereof. The phenolic ingredient is from the group consisting of menthol, eucalyptol, methyl salicylate, thymol, triclosan, and mixtures thereof. A cyclodextrin may be included that in the composition. The cyclodextrin is from the group consisting of hydroxypropyl β -cyclodextrin, hydroxyethyl β -cyclodextrin, hydroxypropyl γ -cyclodextrin, hydroxyethyl γ -cyclodextrin, α -cyclodextrin, methyl β -cyclodextrin, and mixtures thereof (abstract and col. 1, lines 40-54).

The oral rinse and dentifrice composition comprising the cyclodextrin combats plaque. Plaque forms on the surface of a tooth. In this regard, Nelson neither discloses nor suggests inhibiting the invasion and infection of bacteria into a cell or administering cycloglycan in an amount sufficient to reduce such an invasion and infection, as claimed (see independent claims 36 and 53).

The Examiner's attention is also respectfully directed to new claims 45, 49-52 and 54-55. Claim 45 further characterizes the manner in which the cycloglycans of the

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invention are administered. Claims 49-51 and 53 further recite that the bacteria is a particular type of bacteria. Claims 52 and 54 recite that the subject has a disease caused by said pathogenic, intracellular bacteria. The publication fails to disclose or suggest any of the recitations of claims 45, 49-52, and 54-55.

In this regard, Nelson fails to anticipate the claimed invention.

Thus, Applicants most respectfully request that the rejection be withdrawn.

Claims 19-25, 27-30, 32 and 35 are rejected under 35 U.S.C. 102(b) as allegedly being anticipated by Bernstein (U.S. Patent No. 4,040,160). Applicants believe the present amendment overcomes this rejection.

Bernstein disclosed a method of inhibiting the complement system in a (inaudible) fluid containing complement with cyclodextrin sulfate salts (col. 2, lines 60-68). Bernstein is neither interested in nor suggests a method for reducing the invasion and infection of a pathogenic, intracellular bacteria in mammalian cells or a subject. However, as noted above, the claimed invention is directed to a method for reducing the invasion and infection of pathogenic, intracellular bacteria. Thus, Bernstein cannot anticipate the claimed invention.

The Examiner's attention is also respectfully directed to new claims 45, 49-52 and 54-55. Claim 45 further characterizes the manner in which the cycloglycans of the invention are administered. Claims 49-51 and 53 further recite that the bacteria is a particular type of bacteria. Claims 52 and 54 recite that the subject has a disease

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caused by said pathogenic, intracellular bacteria. The publication fails to disclose or suggest any of the recitations of claims 45, 49-52, and 54-55.

In this regard, Applicants respectfully request that the anticipation rejection be withdrawn.

Claims 19-21, 23-25, 28-31 and 35 are rejected under 35 U.S.C. 102(b) as allegedly being anticipated by Castro Hermida et al. Applicants believe the present amendment overcomes this rejection.

The Castro Hermida et al. article is directed to determining the efficacies of diloxanide furoate, β -cycl-dextrin in a cyclodextrin inclusion complex against *Cryptosporidium parvum* (abstract). However, the article does not disclose or suggest a method for reducing the invasion and infection of a pathogenic, intracellular bacteria in mammalian cells or a subject as claimed. The article does not suggest administering the cycloglycan as recited in either independent claims 36 and 53. Independent claims 36 and 53 each recite a cycloglycan in accordance with previous claim 22. However, previous claim 22 was not subject to this rejection. Thus, independent claims 36 and 53 each recite subject matter acknowledged as being novel by the Official Action.

In view of the above, Applicants respectfully request that the anticipation rejection be withdrawn.

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In view of the above, Applicants respectfully submit that the present application is
in condition for allowance at the time of the next Official Action.

Respectfully submitted,
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